

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

Application No.: 10/732,850  
Filing Date: 12/10/03  
Applicant: Green et al.  
Group Art Unit: 1714  
Examiner: Patrick D. Niland  
Title: USE OF UREA CRYSTALS FOR NON-POLYMERIC  
COATINGS  
Attorney Docket: IN-5587  
HDP Docket No. 0906S-337

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Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Reply Brief Under 37 C.F.R. § 41.41

Sir:

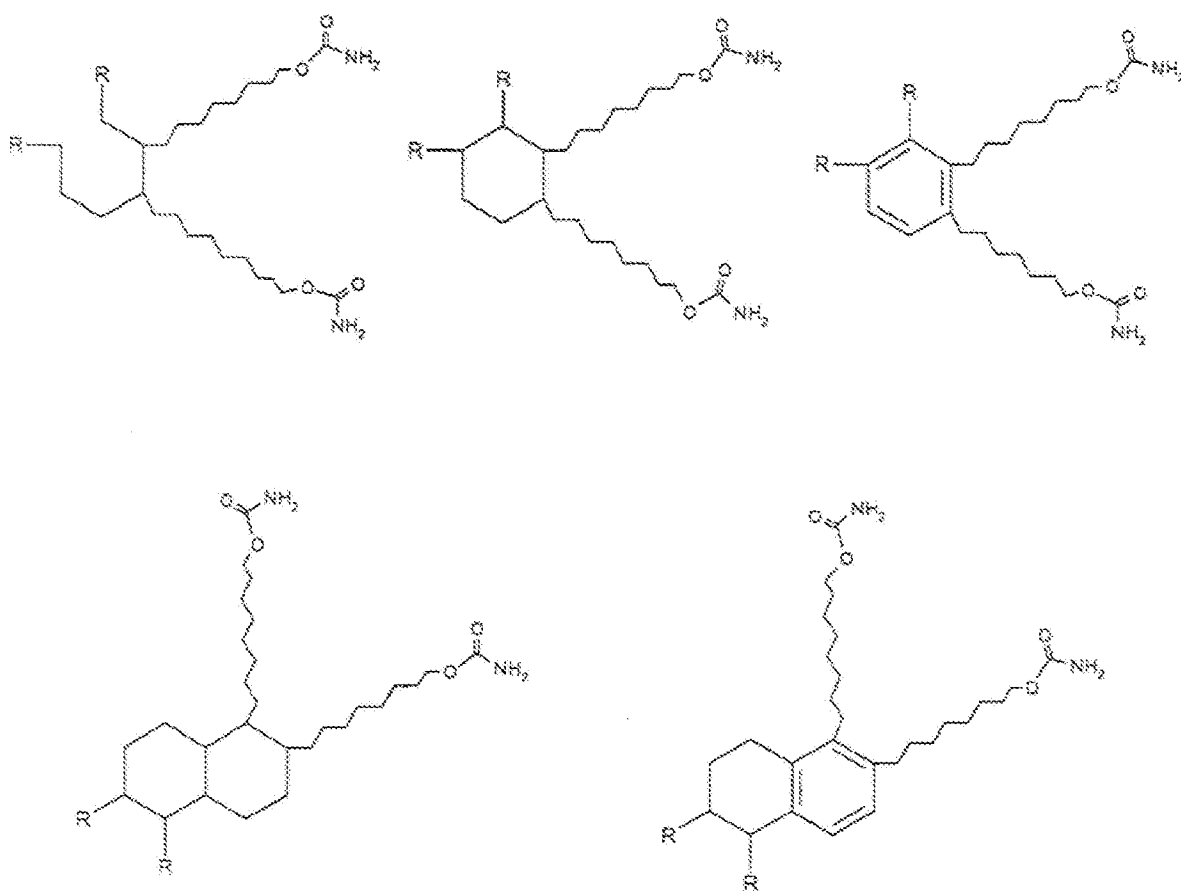
In response to the Examiner's Answer having a notification date of July 31, 2007,  
Appellants file this Reply Brief.

1. Response to the Examiner's Answer regarding the Rejection Under 35 U.S.C. § 102

Appellants submit the following reply to the Examiner's remarks in Section (10) A., located on pages 5 to 7 of the Examiner's Answer. The Examiner's argument is misconstruing the cited passage of Appellants' specification and is not interpreting the passage properly in view of the entire paragraph or the specification viewed as a whole. The "oligomer products" cited by the Examiner are properly read as referring to the addition of unsaturated fatty acids the hydrocarbon moiety in the preceding sentence; the "oligomer products" are not referring to oligomers of the monomeric material.

Claim 1 includes at least one monomeric material having a plurality of active hydrogen groups. Appellants have previously pointed to examples of monomeric materials presented in paragraphs [0013] to [0027] of the specification. Page 5, line 20 to page 14, line 5. In a preferred embodiment, the monomeric material may be a material as described in Ohrbom et al., U.S. patent 6,541,594. Page 9, line 14. The monomeric material includes a carbamate-functional material with at least two carbamate groups and a hydrocarbon moiety. Page 9, lines 17-22. The hydrocarbon moiety may include cycloaliphatic or aromatic structures. Page 9, lines 22-23. Such materials may be prepared by addition reaction of unsaturated monofunctional fatty acids having 12 to 18 carbon atoms, followed by conversion of the acid group to a carbamate group. Page 9, line 23 to page 10, line 3. The "unsaturated fatty acids may be dimerized, trimerized, or tetramerized. Higher oligomer products are also possible, but not preferred." Page 10, lines 3-5.

Thus, the quoted passage – “higher oligomer products are also possible, but not preferred” – is referring to the “oligomer products” of the unsaturated fatty acids reacted via addition reaction to cycloaliphatic or aromatic structures to form the monomeric material; i.e., the dimers, trimers, or tetramers in the preceding sentence. Exemplary structures of such materials are shown in paragraph [0021]. Page 11; and see Ohrbom et al., U.S. patent 6,541,594, as incorporated by reference, at col. 5, lines 34-45 and col. 6, line 44 to col. 8, line 25. These exemplary structures are reproduced below for convenience:



Therefore, “oligomer products” is not used in reference to oligomers of the claimed monomeric material, but is referring to additions of the unsaturated fatty acids to the

hydrocarbon moiety to form an exemplary monomeric material. As shown in the above structures, the acid groups are converted to carbamate groups. Page 10, lines 5-15.

As such, the manner in which the Examiner is interpreting the quoted passage is in isolation and not in context with the paragraph of interest or the specification viewed as a whole. The Examiner is alleging that this passage is referring to the monomeric material as an oligomeric product. However, it is clear from paragraph [0020] on pages 9 and 10 of the specification that "oligomer products" is used only in direct reference to dimers, trimers, or tetramers of the (formerly unsaturated) fatty acids that are reacted via addition reactions and bonded to the hydrocarbon moiety. These fatty acid groups can subsequently be converted to carbamate groups to form the plurality of active hydrogen groups of the monomeric material found in claim 1. Page 10, lines 5-15.

In addition, Appellants wish to emphasize that independent claim 1 is expressly drawn to at least one monomeric material. Consequently, it is clear and unambiguous from the claim language, including the specification and examples provided therein, and the previous citation to the Encyclopedia of Polymer Science and Engineering, 2<sup>nd</sup> Ed., Vol. 10, p. 432 (2d ed. 1988), that claim 1 is drawn to a monomeric material that does not include oligomers or polymers with active hydrogen groups. See *Phillips v. AWH Corp.*, 415 F.3d at 1314, 75 USPQ2d at 1327 (the ordinary and customary meaning of a term may be evidenced by a variety of sources, including "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art").

Finally, the Examiner's assertion that Appellants' monomeric material falls under the oligomers of Boisseau is incorrect. Indeed, Appellants' use of "monomeric material," Appellants' examples and disclosure provided in the specification, and the IUPAC definition of oligomer evidenced by Encyclopedia of Polymer Science and Engineering, Vol. 10, p. 432 (2d ed. 1988), all serve to establish that the presently claimed monomeric material is distinct from the Boisseau oligomers, and would be recognized as such by a person having ordinary skill in the art.

Because the Boisseau publication does not teach or disclose every element of the present claims including a monomeric material, Appellants submit that the rejection should be REVERSED.

## 2. Response to the Examiner's Answer regarding the Rejection Under 35 U.S.C. § 103

Appellants submit the following reply to the Examiner's remarks in Section (10) B. on page 8 of the Examiner's Answer.

The rejection based on 35 USC §103 relies on Boisseau as the primary reference. As described in the preceding section, Appellants' monomeric material is distinct from the Boisseau oligomers. Proper reading of Appellants' claims and specification, further evidenced by extrinsic sources, demonstrates that the claimed monomeric material is not described by Boisseau. As previously noted by Appellants, addition of the Green and Ohrbom references fails to cure the deficiencies of the Boisseau reference. Finally, no apparent reason is provided in the rejection based either on the references themselves or the general knowledge in the art by which a

skilled artisan would modify the reference combination to include the missing subject matter. See *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007) (an obviousness inquiry includes determining whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue).

Because the reference combination does not teach or disclose every element of the present claims and no apparent reason exists for a skilled artisan to include the missing subject matter, Appellants submit that the rejection should be REVERSED.

#### CONCLUSION

The present claims are patentable over the cited art. Appellants, therefore, respectfully petition this Honorable Board to reverse the final rejection of the claims on each ground and to indicate that all claims are allowable.

Respectfully submitted,

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